



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0369; Directorate Identifier 2012-NM-128-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 757 airplanes. This proposed AD was prompted by reports of fractured rudder pedal pushrod connecting bolts in a rudder pedal assembly. This proposed AD would require repetitive replacements of the rudder pedal pushrod connecting bolts and repetitive inspections of the rudder pedal assembly bolt holes in each of the captain and the first officer rudder pedal assemblies, and if necessary, repair or replacement of worn rudder pedal assemblies. We are proposing this AD to prevent fracture of the rudder pedal pushrod connecting bolts during pedal use, which could result in a large involuntary input to the rudder, nose-wheel steering, and braking systems, leading to a runway excursion.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Marie Hogestad, Aerospace Engineer, Systems and Equipment Branch, FAA, ANM-130S, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6418; fax: 425-917-6590; email: [marie.hogestad@faa.gov](mailto:marie.hogestad@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0369; Directorate Identifier 2012-NM-128-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We received reports of fractured rudder pedal pushrod connecting bolts on Boeing Model 757 airplanes. One operator discovered a bolt was fractured during an inspection, following a report that the captain’s right pedal was loose. Another operator reported a fractured bolt during the airplane pushback. When the captain applied the brakes, the right hand rudder pedal collapsed and both pedals fell forward. An inspection revealed that a rudder pedal pushrod bolt was fractured, resulting in a full left rudder input. Also, in a separate incident, during routine maintenance, while the brakes were released, a loud crack was heard and the right hand rudder pedal went all the way forward. During investigation, it was determined that the captain’s right hand rudder pedal pushrod bolt had fractured. The rudder pedal pushrod connecting bolt secures the rudder pedal arm to the rudder pushrod. The bolt is cantilevered in a single shear arrangement that is not capable of carrying its design load if there is looseness in the installation (bolt bending is

introduced). The bolts can also rotate, due to lack of bolt clamp-up, causing additional wear. This condition, if not corrected, could result in a fracture of the rudder pedal pushrod connecting bolts during pedal use, which could result in large involuntary input to the rudder, nose-wheel steering, and braking systems, leading to a runway excursion.

### **Related Rulemaking**

We issued AD 2001-22-13, Amendment 39-12492 (66 FR 55075, November 1, 2001), for certain Model 737, 747, 757, 767, and 777 series airplanes. That AD requires replacing the rudder pedal pushrod fasteners (bolts) for the captain's and first officer's pedal assemblies with titanium fasteners (bolts).

We have determined that titanium bolts are under-strength on Model 757 airplanes and must be replaced with Inconel bolts. Titanium bolts do, however, meet the static and fatigue requirements for the other airplane models affected by AD 2001-22-13, Amendment 39-12492 (66 FR 55075, November 1, 2001).

### **Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2013-0369.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously. Replacements of the rudder pedal pushrod

connecting bolts are done after each inspection specified in paragraph (g) of this AD, regardless of the inspection results. Some actions would terminate the requirements of AD 2001-22-13, Amendment 39-12492 (66 FR 55075, November 1, 2001), for Model 757 airplanes.

### **Costs of Compliance**

We estimate that this proposed AD affects 685 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspect/replace bolts (Condition 1 in the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012)	5 work-hours X \$85 per hour = \$425 per inspection cycle	\$217	\$642 per inspection cycle	\$439,770 per inspection cycle

We estimate the following costs to do any necessary repairs/replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these repairs/replacements:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replace rudder pedal assembly (Condition 2 in the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012)	2 work-hours X \$85 per hour = \$170	Unknown	\$170
Repair rudder pedal assembly (Condition 3 in the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012)	3 work-hours X \$85 per hour = \$255	Unknown	\$255
Repair rudder pedal assembly (Condition 4 in the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012)	4 work-hours X \$85 per hour = \$340	Unknown	\$340

The on-condition costs in the table above are per rudder pedal assembly.

Depending on the diameter of the holes found during the inspection, it may be necessary to replace or repair the rudder pedal assemblies. The parts cost to replace or repair the rudder pedal assemblies are not included in the estimate. It is considered "Parts &

Materials Supplied by the Operator”, which is referenced in Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

#### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2013-0369; Directorate Identifier 2012-NM-128-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

Certain requirements of this AD terminate the requirements of AD 2001-22-13, Amendment 39-12492 (66 FR 55075, November 1, 2001), for Model 757 airplanes.



**(c) Applicability**

This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 27, Flight Controls.

**(e) Unsafe Condition**

This AD was prompted by reports of fractured rudder pedal pushrod connecting bolts in the rudder pedal assembly. We are issuing this AD to prevent fracture of the rudder pedal pushrod connecting bolts during pedal use, which could result in a large involuntary input to the rudder, nose-wheel steering, and braking systems, leading to a runway excursion.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspection**

Within 60 months after the effective date of this AD, do a detailed inspection of the rudder pedal assembly bolt holes to determine the diameter, in each of the captain and the first officer rudder pedal assemblies, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012. Repeat this inspection thereafter at intervals not to exceed 15,000 flight cycles.

**(h) Installation**

Do the applicable actions specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD for each of the captain and first officer rudder pedal assemblies, based on the results of any inspection required by paragraph (g) of this AD. Accomplishment of paragraph (h)(1), (h)(2), or (h)(3) of this AD terminates the requirements of AD 2001-22-13,

Amendment 39-12492 (66 FR 55075, November 1, 2001), for that Model 757 airplane only.

(1) If the diameters of both holes are within 0.3120 and 0.3140 inch on the assembly, before further flight, install new rudder pedal pushrod connect bolt, washer, nut, and cotter pin, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

(2) If the diameter of only one hole is greater than 0.3140 inch on the assembly, before further flight, do the actions specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this AD.

(i) Install a new rudder pedal assembly, or install a bushing in the worn hole, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

(ii) Install new rudder pedal pushrod connecting bolt, washer, nut, and cotter pin, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

(3) If the diameters of both holes are greater than 0.3140 inch on the assembly, before further flight, do the actions specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD.

(i) Install a new rudder pedal assembly, or install two bushings in the two worn holes, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

(ii) Install new rudder pedal pushrod connecting bolt, washer, nut, and cotter pin, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, as revised by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

**(i) Parts Installation**

As of the effective date of this AD, no person may install, in a rudder pedal assembly of any Boeing 757 airplane, a bolt having part number (P/N) BACB30NM5DK47.

**(j) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraphs (g) and (h) of this AD, if operators installed washers having part number NAS1149D0516J, NAS1149D0532J, and NAS1149D0563J, and if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 757-27A0153, dated May 9, 2012, which is not incorporated by reference in this AD, as unmodified by Boeing Alert Service Bulletin 757-27A0153, Revision 1, dated October 29, 2012.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(I) Related Information**

(1) For more information about this AD, contact Marie Hogestad, Aerospace Engineer, Systems and Equipment Branch, FAA, ANM-130S, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6418; fax: 425-917-6590; email: [marie.hogestad@faa.gov](mailto:marie.hogestad@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on May 2, 2013.

Ali Bahrami,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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